

We claim:

1. A position location system for determining a geographic position comprising:

- a global positioning system (GPS) receiver that receives global positioning system satellite signals from a plurality of global positioning system satellites, and calculates the geographic position using the received global positioning system satellite signals;
- a mobile cellular portion that receives cellular position signals that do not contain data in a GPS-like format from a plurality of cellular network base stations and calculates the geographic position using the received cellular position signals; and
- a central processor connected to said global positioning system receiver and to said mobile cellular portion, wherein said central processor control operation of said global positioning system receiver and said mobile cellular receiver.

2. The position location system of claim 1, wherein said central processor causes one of said global positioning system receiver and said mobile cellular portion to calculate the geographic position.

3. The position location system of claim 2, wherein said central processor causes said global positioning system receiver to calculate the geographic position when a requisite number of the plurality of global positioning system satellites are in view of said global positioning system receiver.

4. The position location system of claim 2, wherein said central processor causes said mobile cellular portion to calculate the geographic position when a requisite number of the plurality of global positioning system satellites are not in view of said global positioning system receiver.

5. The position location system of claim 4, wherein said central processor is configured to calculate a clock drift error measurement, and is further configured to correct the calculated geographic position using said clock drift error measurement to obtain a corrected geographic position.

6. The position location system of claim 2, wherein said central processor causes said mobile cellular receiver to calculate the geographic position when a requisite number of cellular signals are being received, and causes said global positioning system receiver to be substantially turned off when the requisite number of cellular signals are being received.

7. The position location system of claim 1, further comprising a mobile terminal that houses said global positioning system receiver, said mobile cellular portion, and said central processor.

8. The position location system of claim 1, wherein said central processor is integrally formed with one of said global positioning system receiver and said mobile cellular portion.

9. The position location system of claim 1, wherein said mobile cellular portion calculates the geographic position using one of a time of arrival method for calculating geographic position and a time difference of arrival method for calculating geographic position.

10. The position location system of claim 1, wherein said mobile cellular portion further comprises:

- a cellular antenna that receives a radio frequency signal having a frequency in a cellular frequency band, said radio frequency signal containing differential error correction data;

a radio interface unit connected to said cellular antenna, wherein said radio interface unit converts said received radio frequency signal into an intermediate frequency signal;

a digital signal processor connected to said radio interface unit, wherein said digital signal processor converts said intermediate frequency signal into a data stream;

a central processor connected to said digital signal processor, wherein said central processor extracts said differential error correction data from said data stream; and

a differential global positioning system processor connected to said central processor,

wherein said central processor forwards said differential error correction data to said differential global positioning system processor.

11. A method for determining a geographic position of a mobile terminal comprising the steps of:

receiving global positioning system satellite signals from a plurality of global positioning system satellites;

receiving a plurality of cellular position signals;

calculating the geographic position of the mobile terminal using said received global positioning system satellite signals when a requisite number of the plurality of global positioning system satellites are in view of a global positioning system receiver; and

calculating the geographic position of the mobile terminal using only said received plurality of cellular position signals when the requisite number of the plurality of global positioning system satellites are not in view of the global positioning system receiver.

12. The method of claim 11, further comprising the steps of:

receiving a differential error correction data signal containing differential error correction data; and

correcting said calculated geographic position using said differential error correction data.

13. The method of claim 12, wherein said differential error correction data signal is received in a form of a cellular signal having a frequency in a cellular frequency band, the cellular signal including differential error correction data as position location information, and also including non-position location information, and further comprising the step of demodulating said cellular signal to obtain said differential error correction data signal and said non-position location information and to output said differential error correction data on a first communications path and to output said non-position location information on a second communications path different than said first communications path.

14. The method of claim 11, further comprising the step of forwarding the geographic position calculated using said received global positioning system satellite signals to a mobile cellular portion in the mobile terminal.

15. The method of claim 11, wherein said step of calculating the geographic position of the mobile terminal using said received global positioning system satellite signals is carried out using a global positioning system receiver in the mobile terminal.

16. A method for determining a geographic position of a mobile terminal comprising the steps of:

receiving global positioning system satellite (GPS) signals from a plurality of global positioning system satellites;